



Glacken Slope Perimeter Road Improvements

Fresh Pond Reservation, Cambridge, MA

Public Meeting

25 February 2016



Agenda - Glacken Slope

- Introductions (Dave Kaplan, CWD)
- Project Overview - Phases 1 thru 4
- Perimeter Road (Phase 5) -
Proposed Improvements
- Schedule and Traffic Management
- Comments

Locus Plan

**BLACK'S
NOOK**

**LUSITANIA
MEADOW**

**LITTLE FRESH
POND**

**KINGSLEY
PARK**

**SULLIVAN
WATER
PURIFICATION
FACILITY**

**GLACKEN SLOPE
IMPROVEMENTS**

**WEIR
MEADOW**



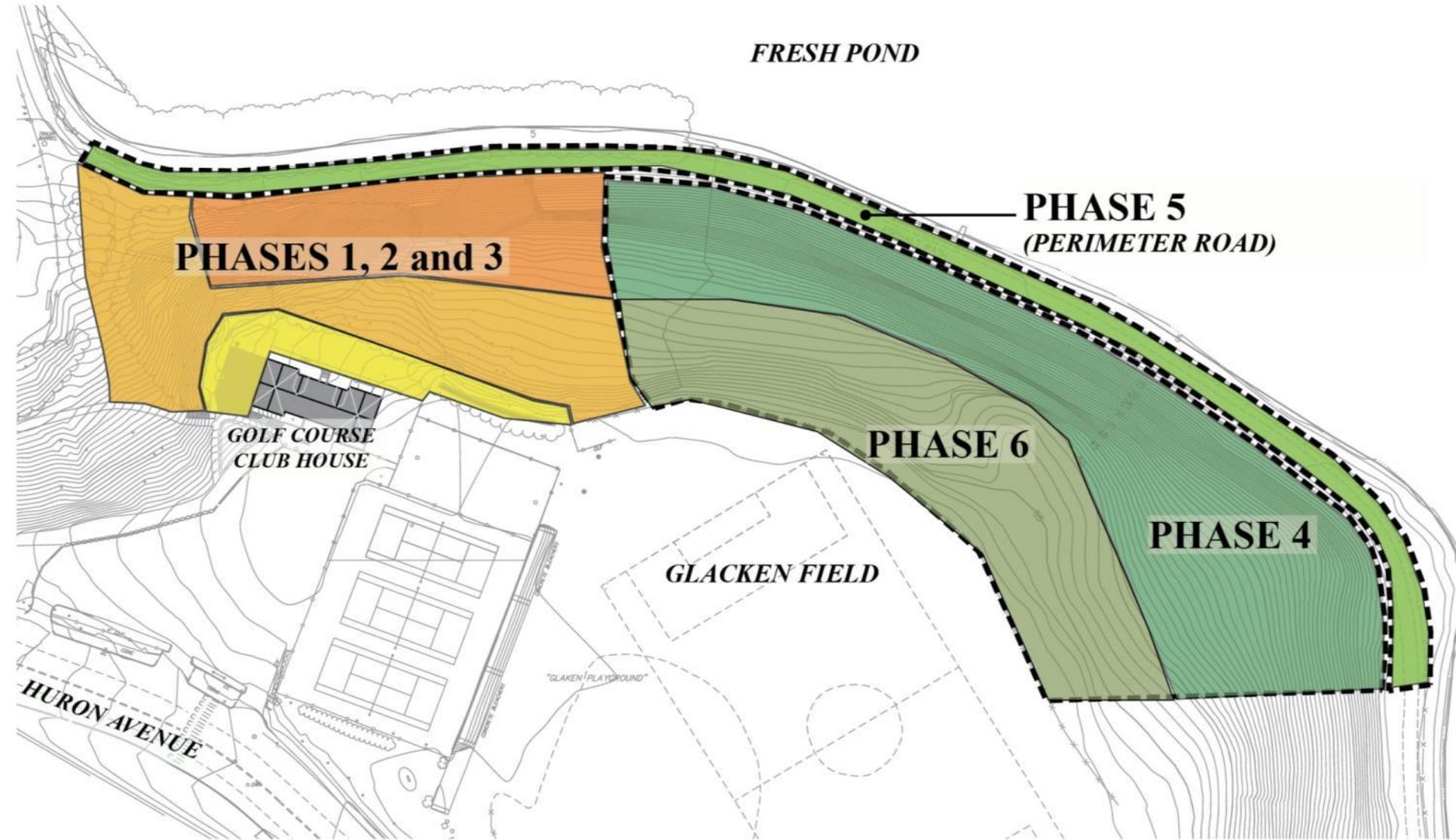
Existing Site Conditions



Project Goals - Glacken Slope

1. Reduce surface runoff, top of slope
2. Stabilize slopes using Bioengineering techniques
3. Restore forest soils
4. Create multilayered forest structure
5. Improve Perimeter Road drainage
6. Replace Reservoir fencing

Project Phasing



Previous Phases

Phase 1 - Stormwater Infiltration

(Completed Summer 2010)

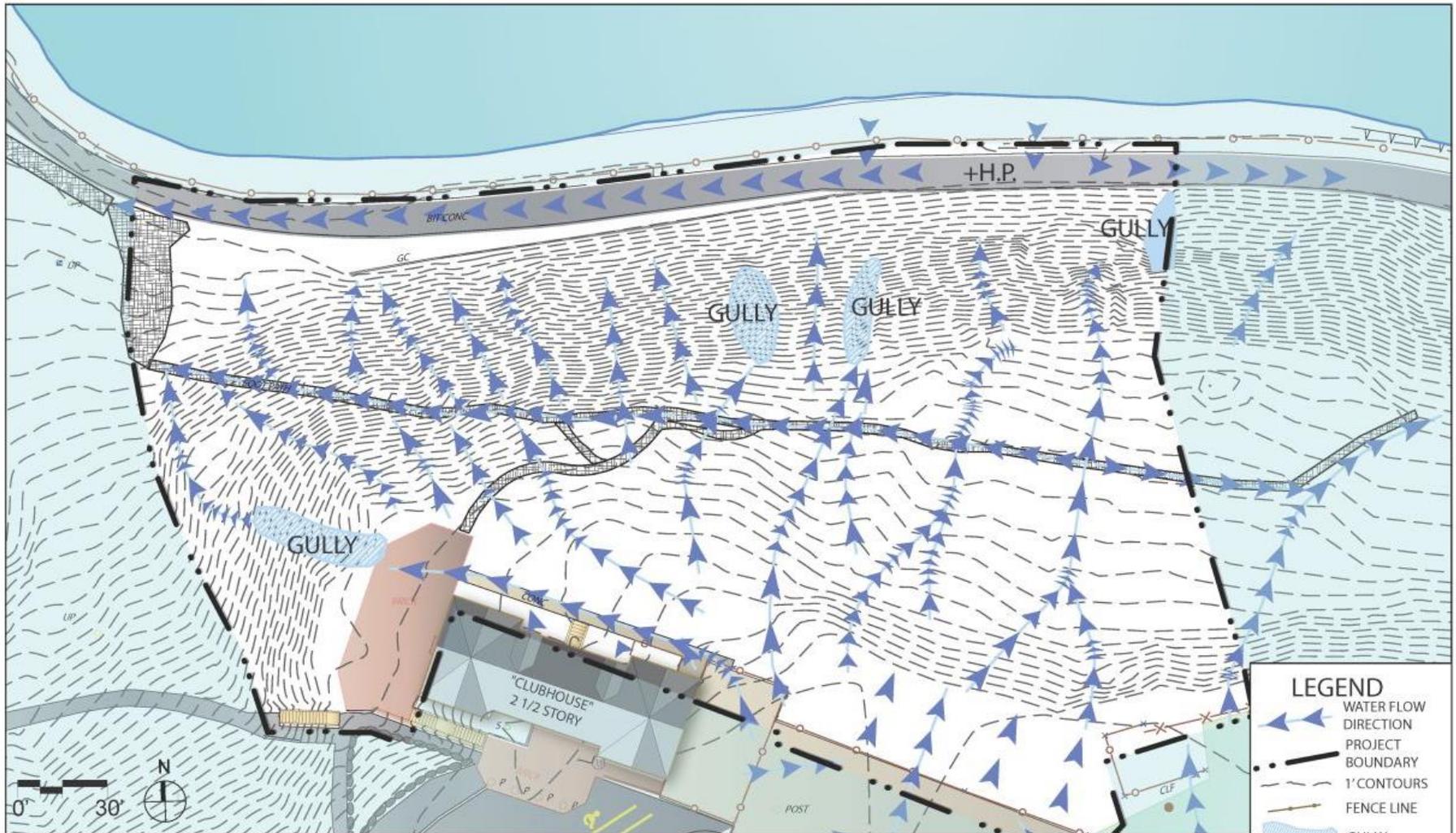
Phases 2&3 - Slope Stabilization

(Completed Summer 2011)

Phase 4 - Slope Stabilization

(Completed Summer 2015)

Surface Hydrologic Analysis



SURFACE HYDROLOGIC ANALYSIS
FRESH POND SLOPE RESTORATION
 INVENTORY + ANALYSIS | JANUARY 2009



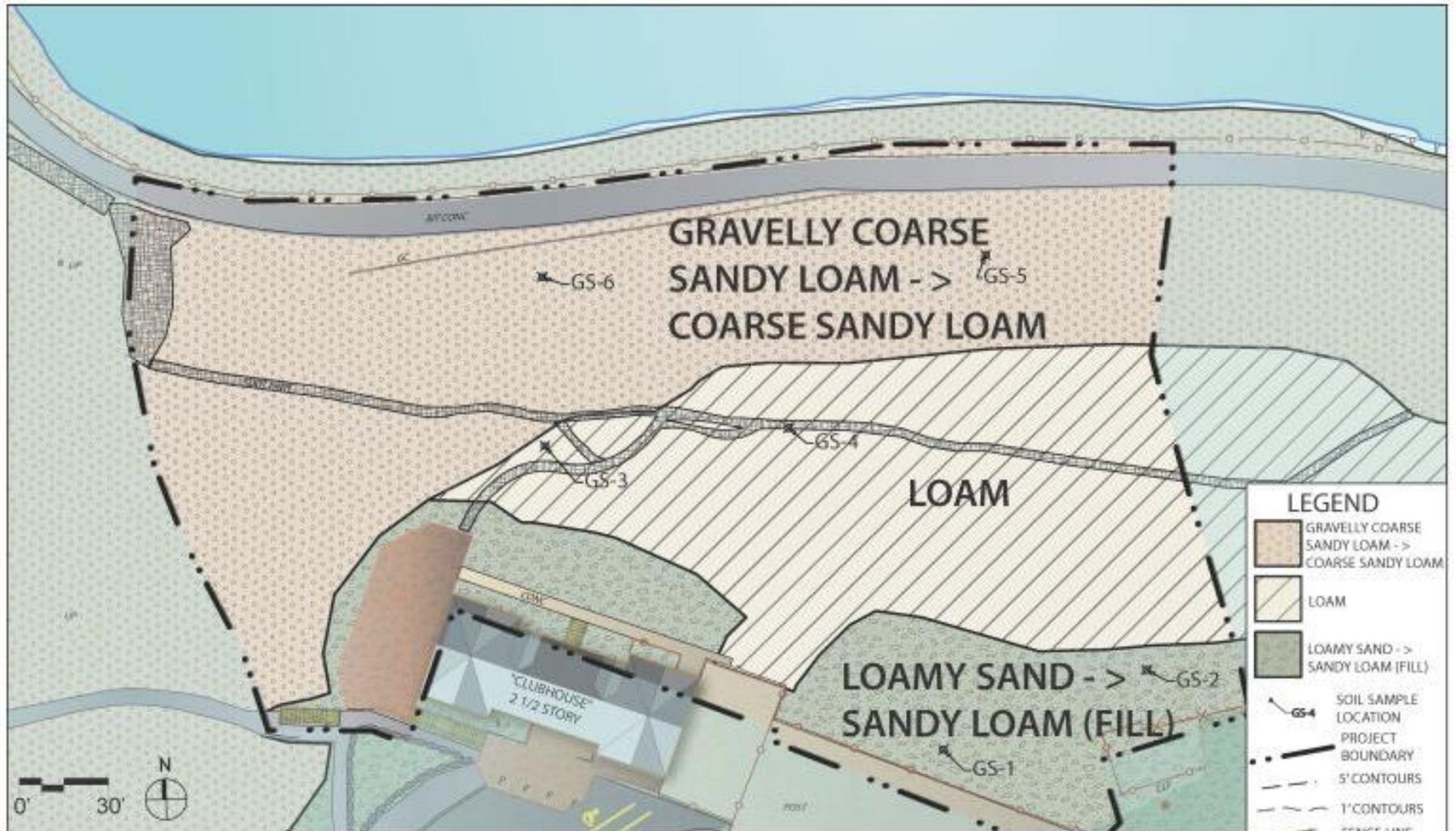
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 Protecting the Cambridge Water Supply Since 1889
 City of Cambridge Water Department
 250 Fresh Pond Parkway
 (617) 349-4170 www.cambridgepsa.gov/cw/



Building Sustainable Communities on an Ecological Foundation
Bioengineering
 GROUP

LEGEND	
	WATER FLOW DIRECTION
	PROJECT BOUNDARY
	1' CONTOURS
	FENCE LINE
	GULLY
	IMPROVISED PATH
	GRANITE CURB

Soils Distribution



SOILS INVENTORY
FRESH POND SLOPE RESTORATION
 INVENTORY + ANALYSIS | JANUARY 2009



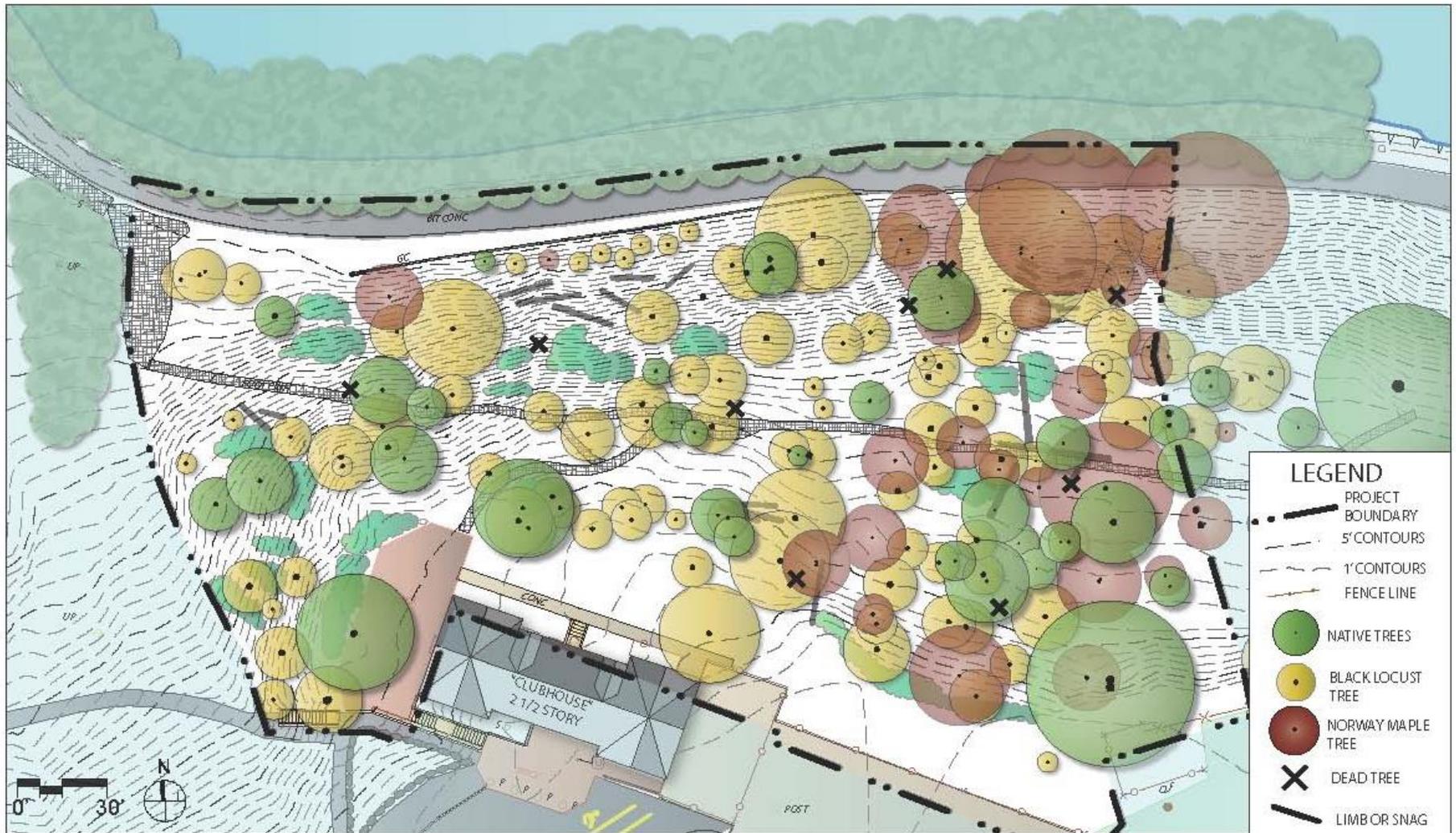
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LEGEND	
	GRAVELLY COARSE SANDY LOAM - > COARSE SANDY LOAM
	LOAM
	LOAMY SAND - > SANDY LOAM (FILL)
	SOIL SAMPLE LOCATION
	PROJECT BOUNDARY
	5' CONTOURS
	1' CONTOURS
	FENCE LINE
	IMPROVISED PATH
	GRANITE CURB

Existing Tree Canopy



LEGEND	
	PROJECT BOUNDARY
	5' CONTOURS
	1' CONTOURS
	FENCE LINE
	NATIVE TREES
	BLACK LOCUST TREE
	NORWAY MAPLE TREE
	DEAD TREE
	LIMB OR SNAG
	IMPROVED PATH
	UNDERBRUSH
	GRANITE CURB

TREE CANOPY INVENTORY
FRESH POND SLOPE RESTORATION
 INVENTORY + ANALYSIS | JANUARY 2009



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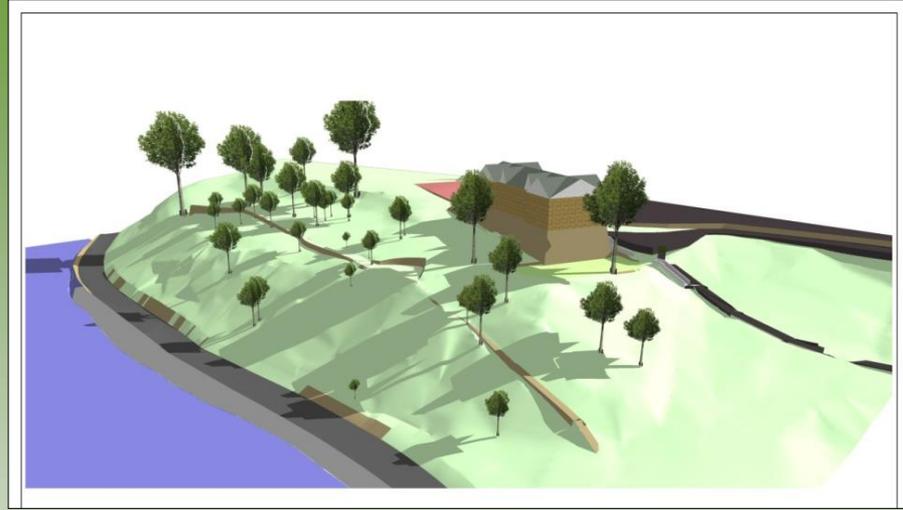


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Tree Canopy Inventory



Existing Conditions – Full Canopy



Native Tree Distribution



Norway Maple Distribution



Black Locust Distribution





We are OPEN!
Matilda's
@Fros n ponds
Burgers Hot Dogs
Sandwiches
Coffee Snacks Soda

Food Service
Food Containers



Phases 2, 3 and 4 - Upper and Lower Slope

- Invasive Species Removal
- Gully Stabilization
- Slope Breaks
- Soil Amendments
- Restoration Plantings



Slope Stabilization

- Erosion Control Blanket
- Compost Filter Socks
- Native Cover Crop Seed Mix







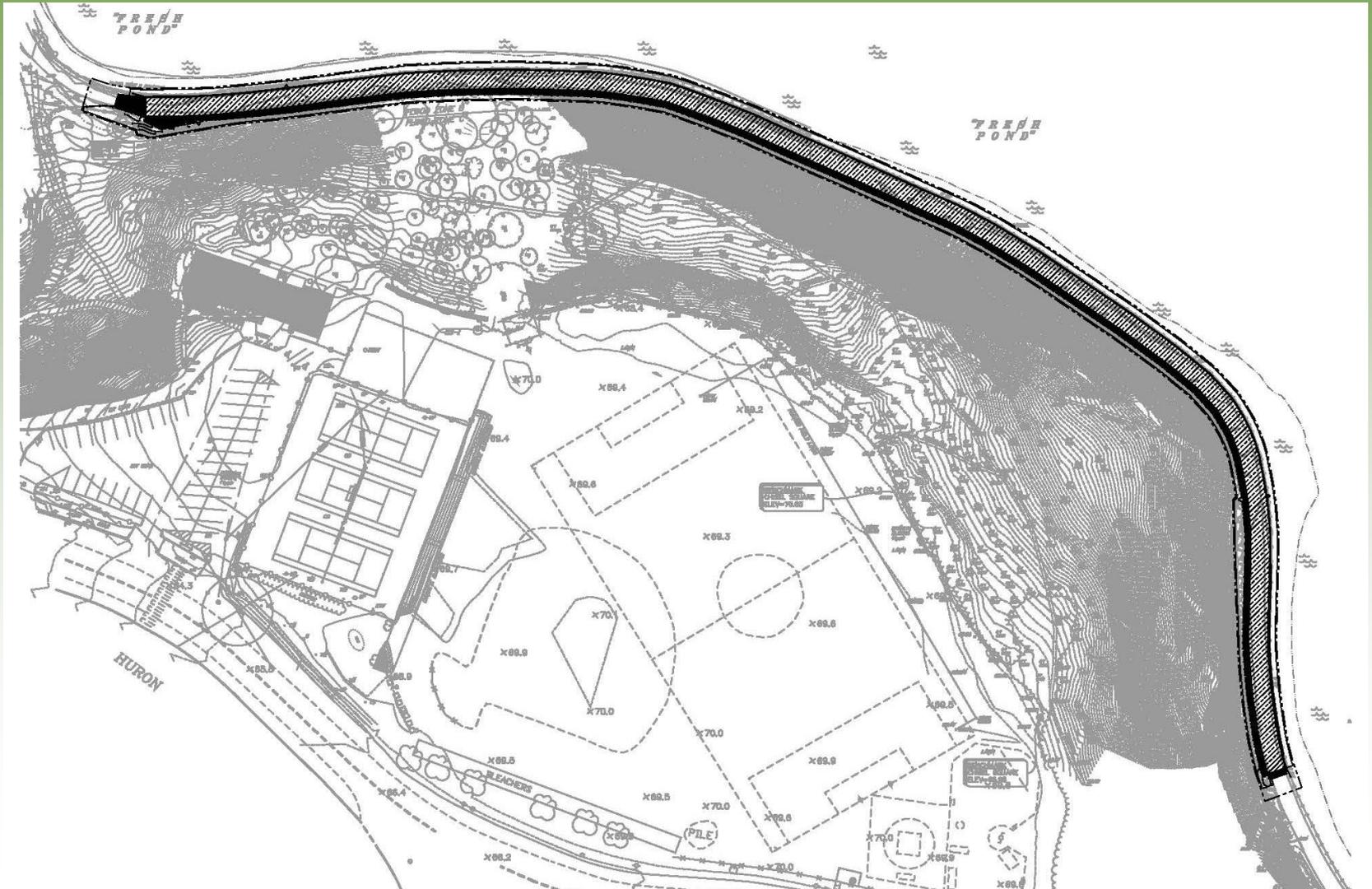


Restoration Planting Approach

- Encourage native plant communities
- Select dense root-matting species
- Restore natural forest duff layer

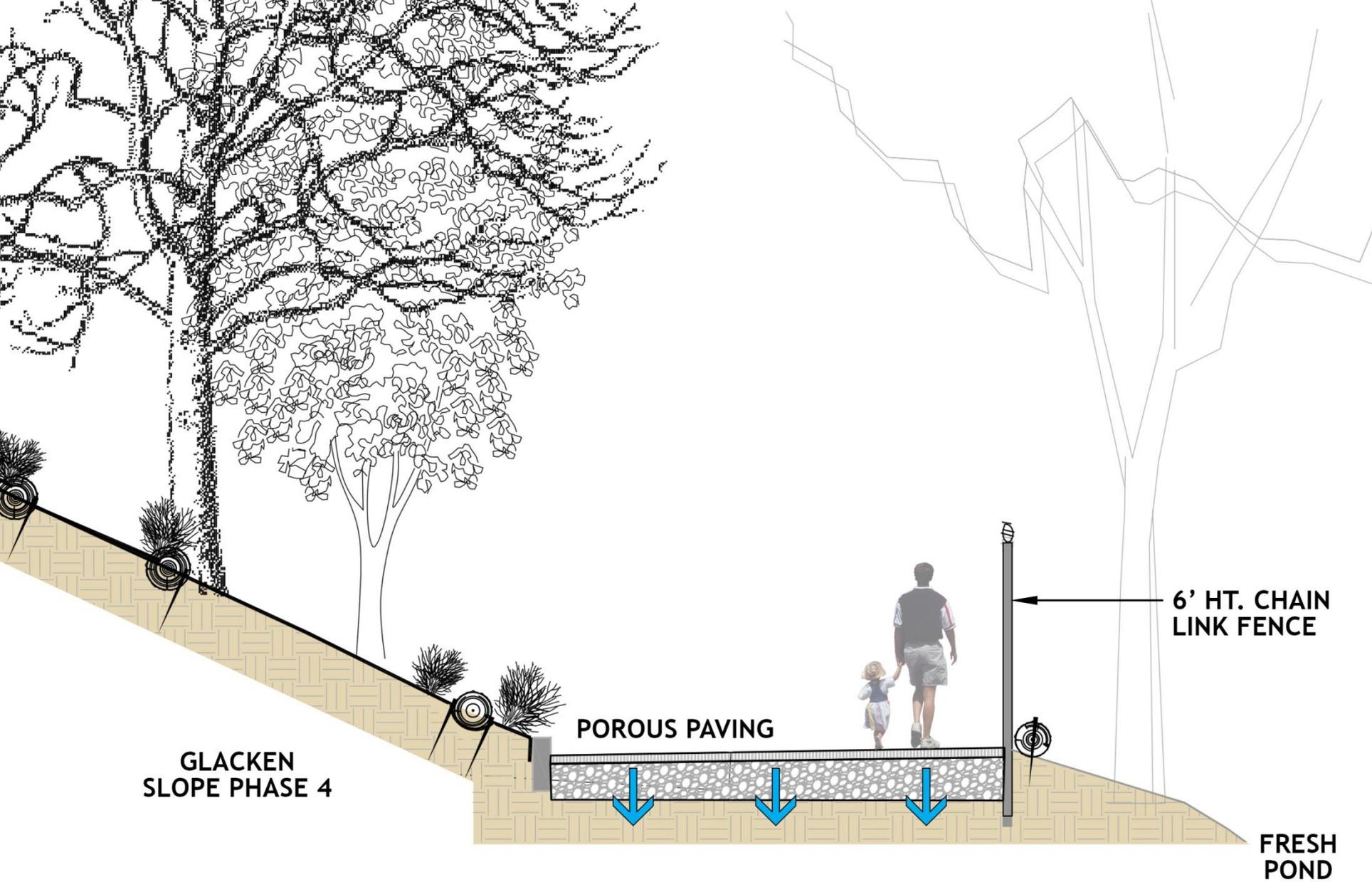


Glacken Phase 5 (Perimeter Road) Improvements





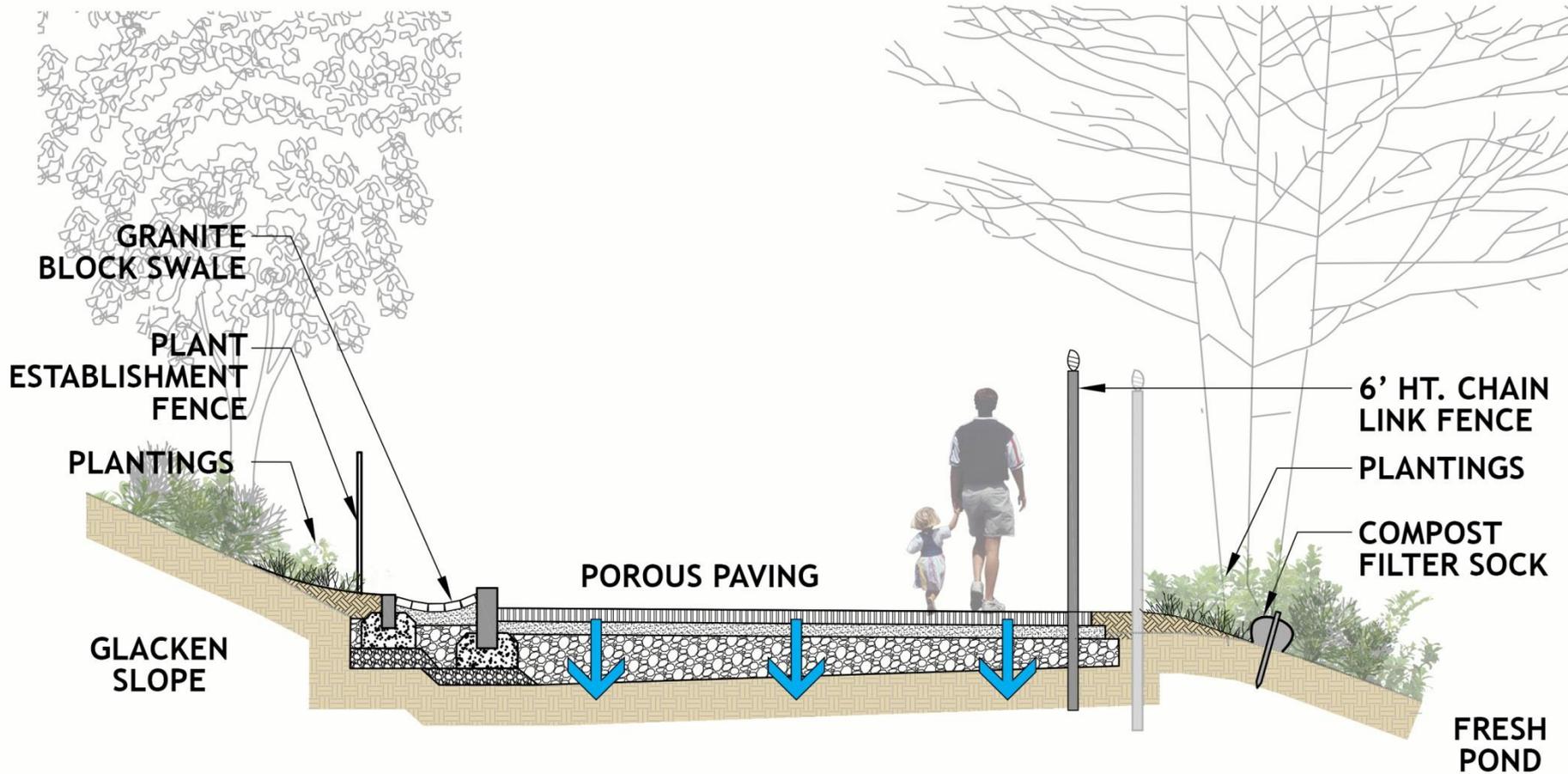
Existing Conditions



Approved Section (2012) - Perimeter Road

Perimeter Road Changes from 2012 Approved Plan

- Swale intercepts slope runoff
- Perimeter Road raised 7" (ave.)
- Fencing relocated – reduced impact to existing mature trees
- New plantings
- Seating area (Option)



Proposed Section - Perimeter Road

Porous Paving





Perimeter Fence





Fountain Terrace Gatehouse

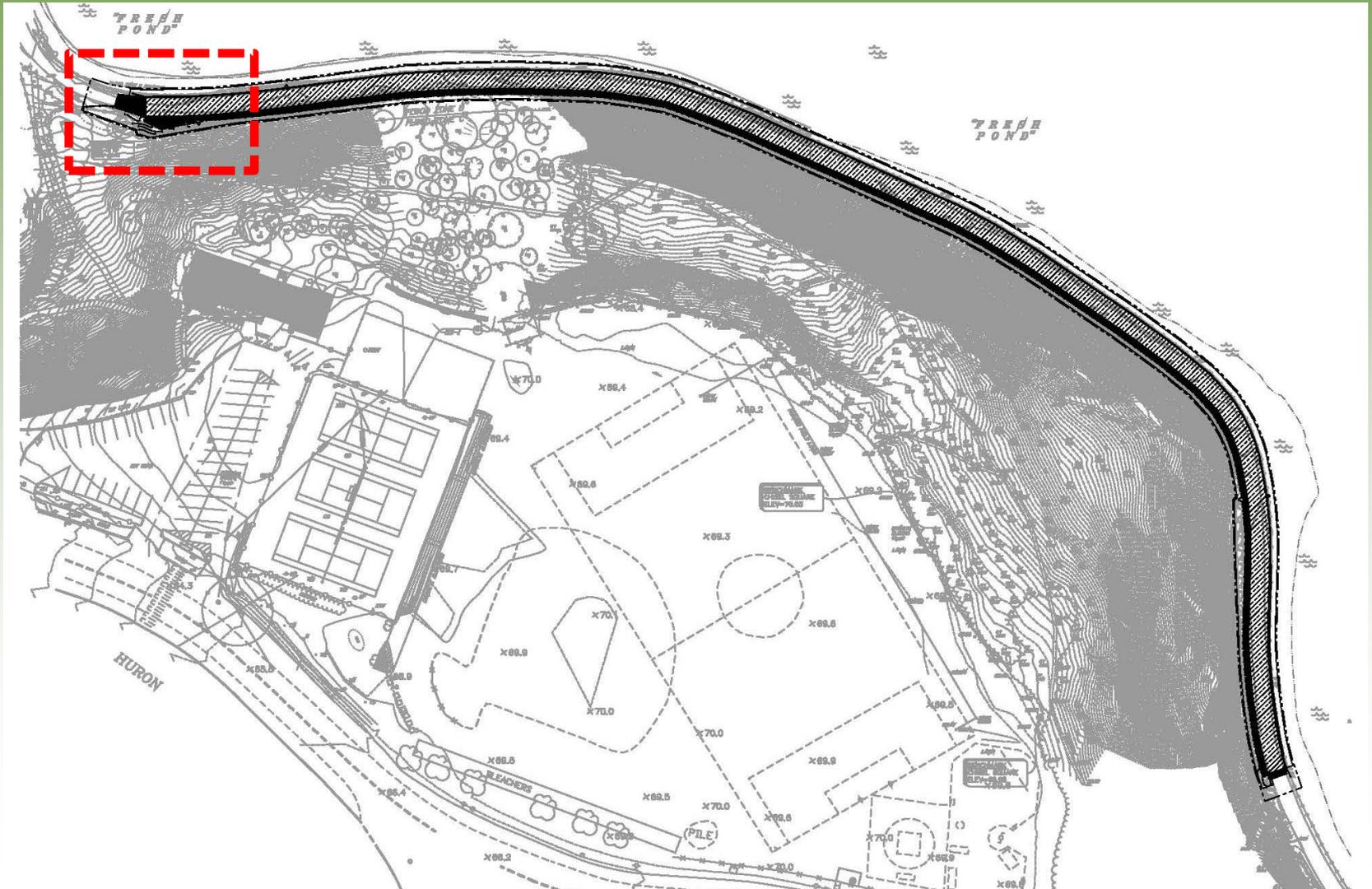


Huron Avenue Bridge



Curb and Swale

Glacken Phase 5 Improvements West Entrance





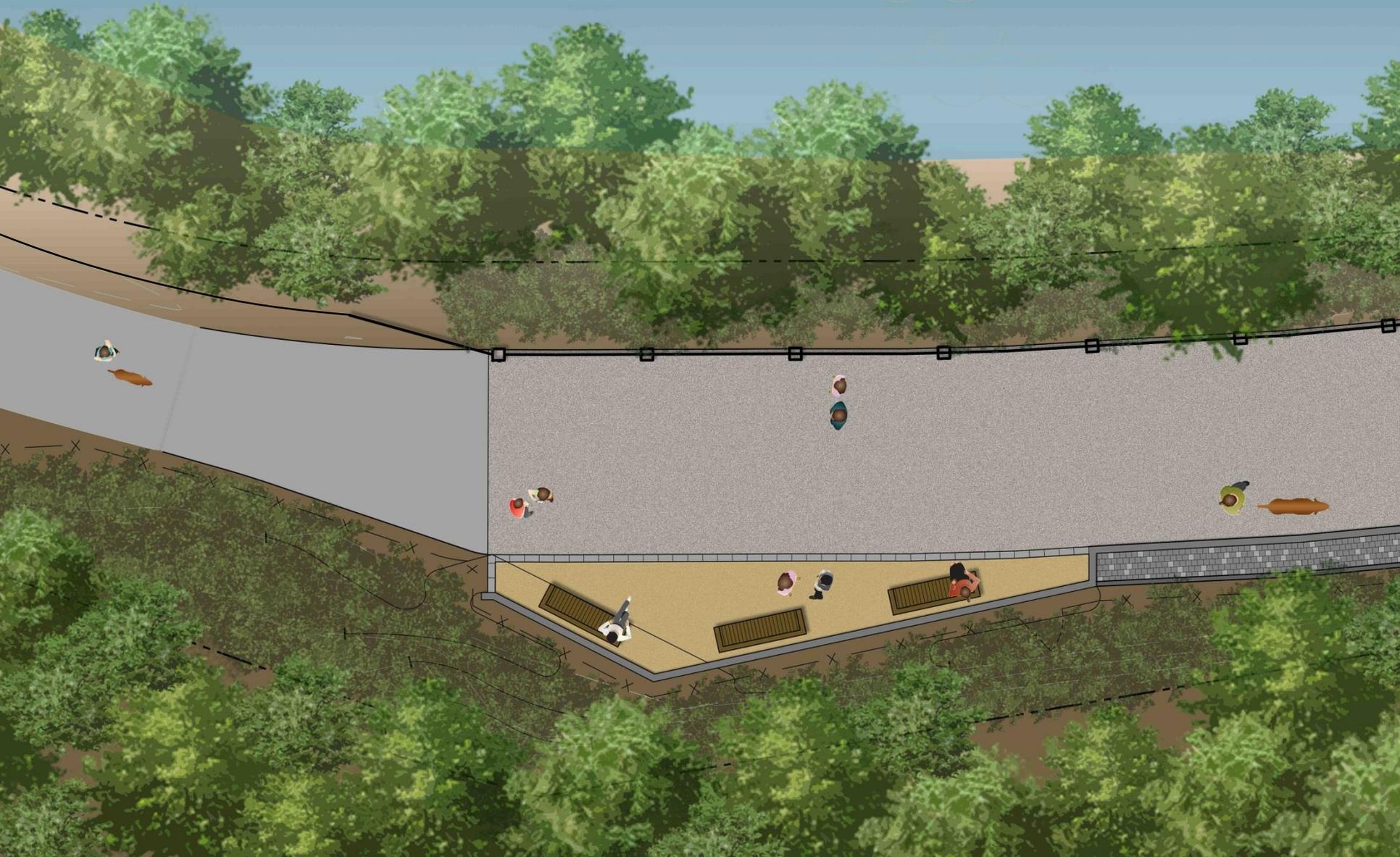


**Proposed
Seating Area**



**Proposed
Seating Area**

Enlargement Plan - Seating Area



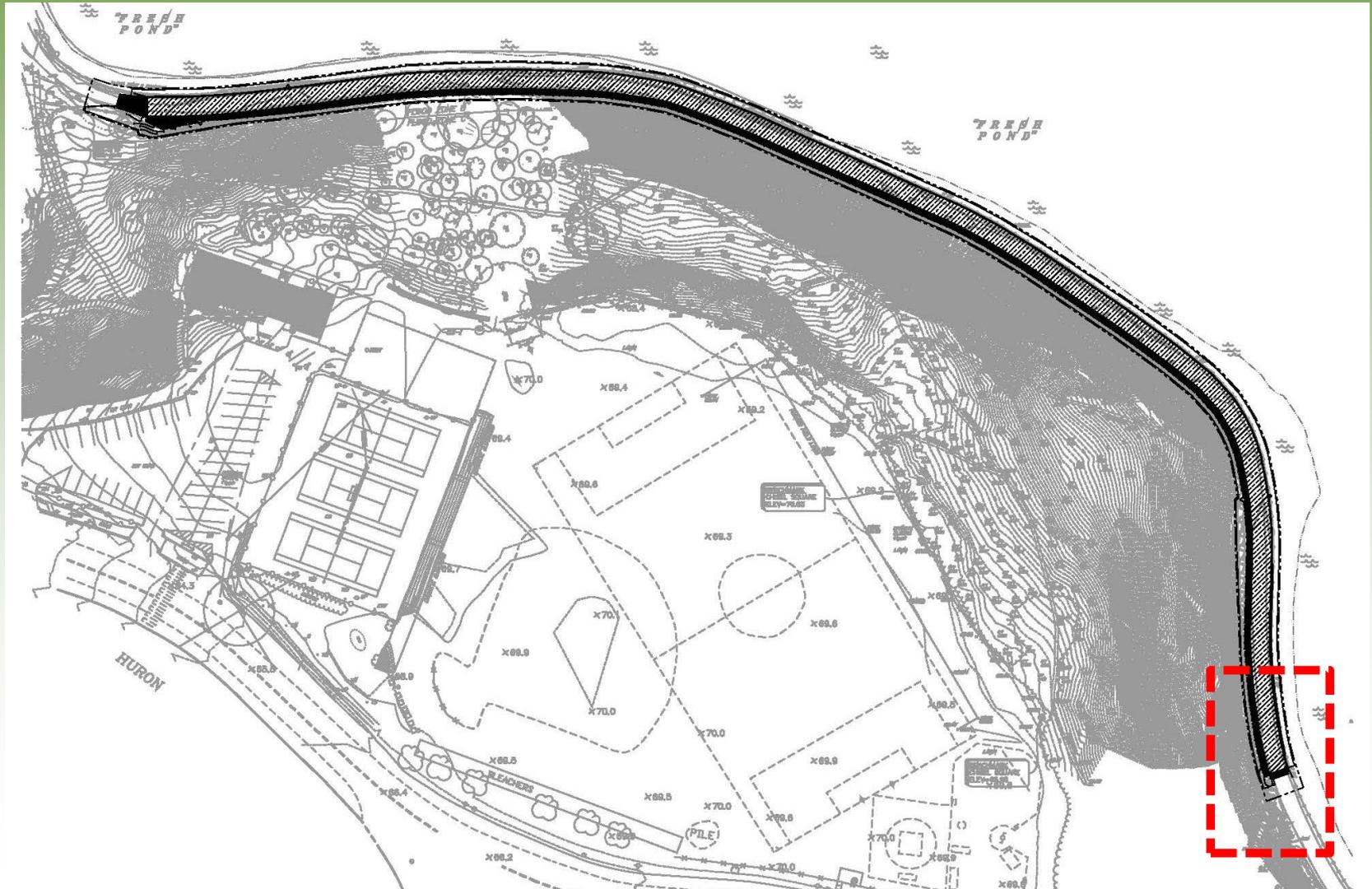
Rustic Benches at Fresh Pond



Rustic Bench Examples

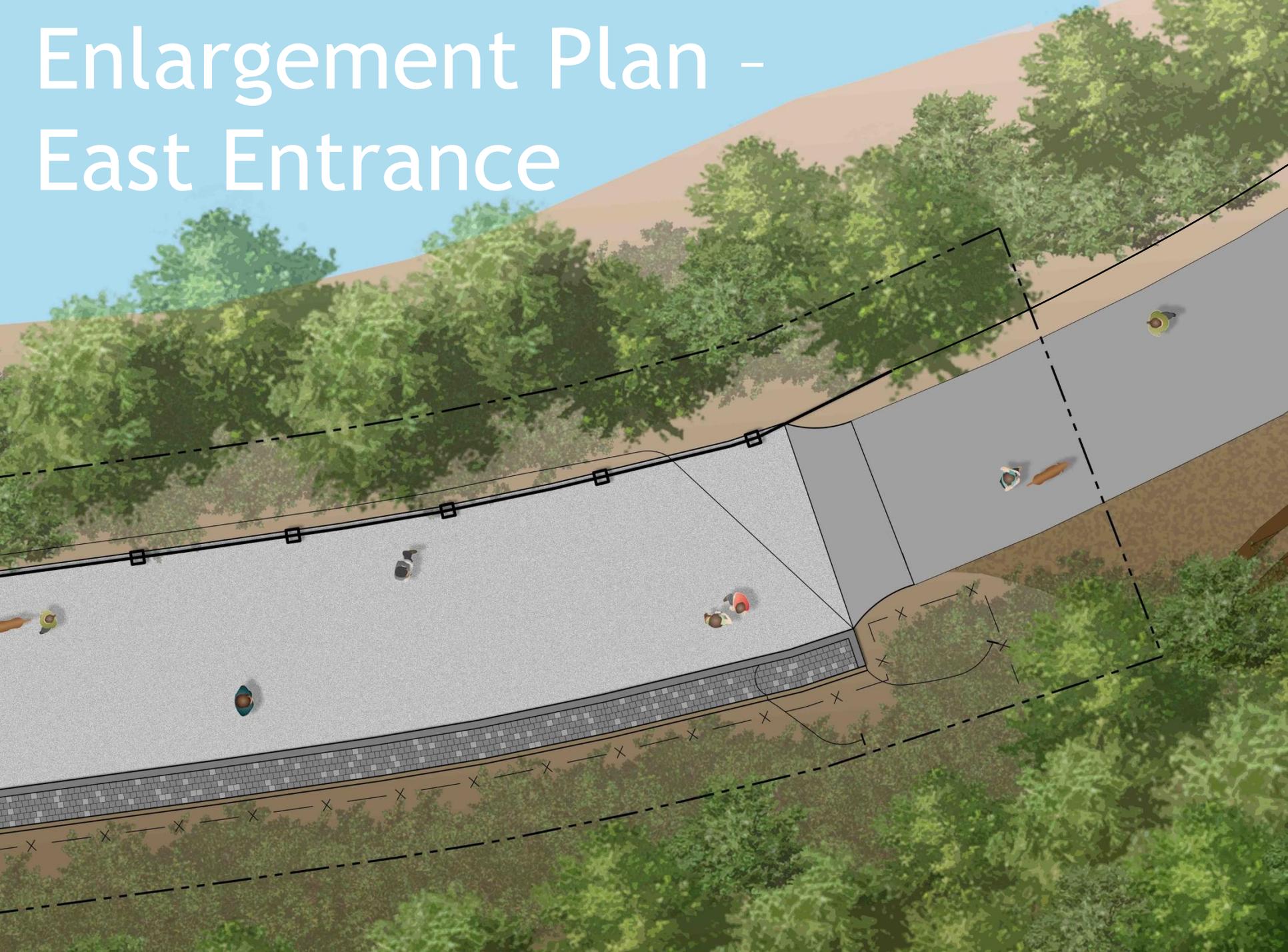


Glacken Phase 5 Improvements East Entrance





Enlargement Plan - East Entrance



Hardwood Forest (Upland)

Understory Shrubs:

Arrowwood viburnum, Spicebush,
Grey dogwood, Witch hazel, Nannyberry

Groundcovers:

Wild ginger, Leatherwood fern, Bracken
fern, Christmas fern, False Solomon's-
seal, Foamflower, Pennsylvania sedge,
White wood aster



Project Schedule

- **Spring 2016 - Bid process for Phase 5 (Perimeter Road) Only**
- **July - August 2016 - Construction Perimeter Road Improvements**
- **Substantial Completion - 9/2/2016 (Friday before Labor Day)**



Construction Access and Staging



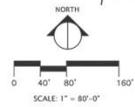
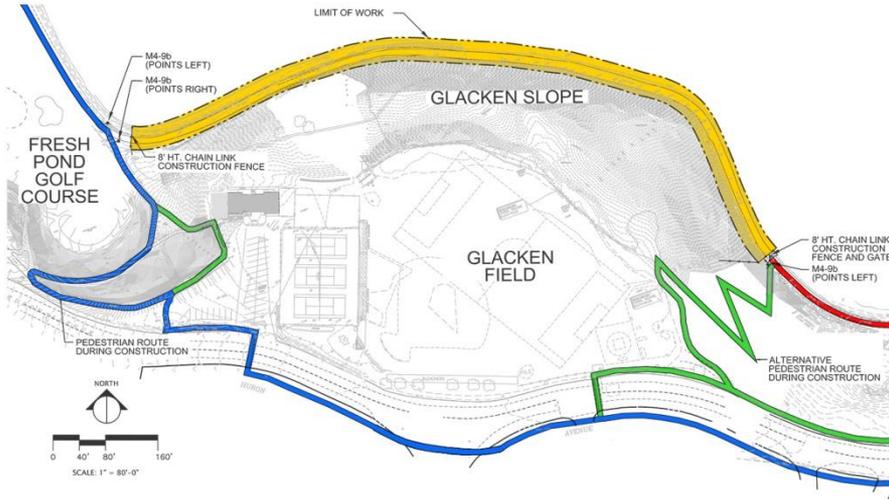
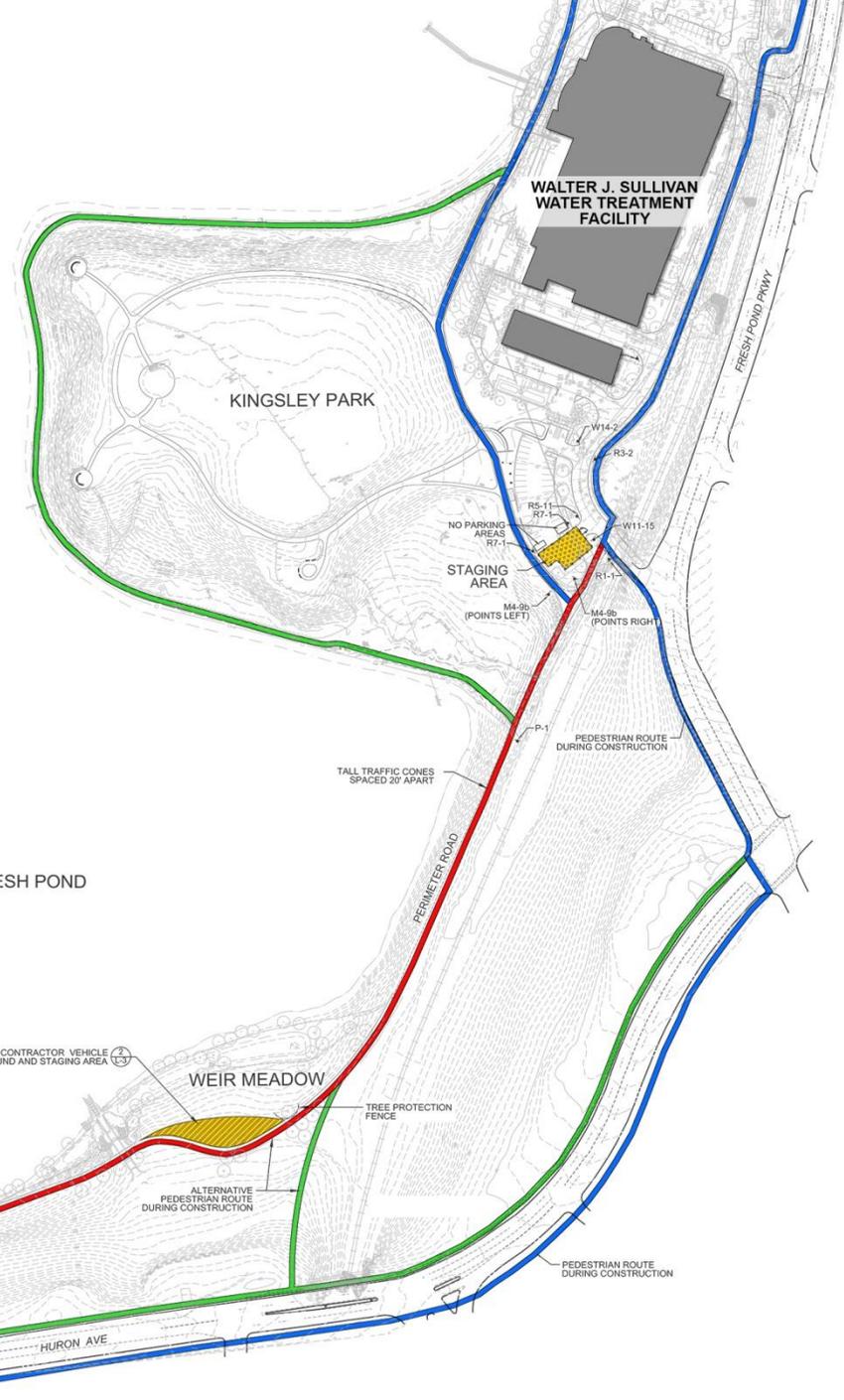
Shared Path During Construction



Construction Staging and Turnaround Area



- CONSTRUCTION AREAS**
- PEDESTRIAN ROUTE**
- ALTERNATIVE PEDESTRIAN ROUTE**
- SHARED ROUTE**



Questions or Comments?

